

## Get Exotic or Go Native

**Managing for “exotic” wildlife,  
requires planning and  
practical use of native range.**

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Have you noticed lately that everywhere you turn, you see leopard prints and zebra stripes? My sister's bed at college is painted in black and white stripes and covered with zebra striped pillows. Her roommate's room is decked out in leopard print from the bed covers to the curtains, and it seems every woman has a leopard print purse. The latest trend in jewelry is turquoise. Sweaters, dresses, and coats this season are fringed to resemble early Native American fashions. So, is it proper to get exotic or go native? The question is asked, “What do fashion trends have to do with rangelands?” The answer is, “Probably very little.” However, the uses of rangelands go through trends just as fashions do.

Rangeland usage varies throughout time based primarily upon economic factors. Unlike several decades ago when sheep and cattle provided sufficient revenues, in Texas today, hunting significantly adds to a rancher's economic returns. White-tailed deer have comprised the majority of the hunting income, but in recent years landowners have expanded their hunting base to include exotic game such as the Greater Kudu, Axis Deer, Sika, and Fallow Deer.

In determining whether to “get exotic,” a rancher must utilize range management techniques. Range management is the science and art of optimizing the returns from rangelands in those combinations most desired by and suitable to a society through the manipulation of range ecosystems, according to the Third Edition of Range Management.

### Three Considerations

Three key range management factors for the landowner to consider include the evaluation of rangeland conditions, dietary needs of wildlife, and population control.

Before introducing exotic game into a landowner's hunting base, the condition of the rangeland must be assessed. The amount of forage available is a major concern for proper range management and maximum economic return. When there is surplus forage, exotics can be stocked without a detrimental effect on the rangeland assuming the range is not already species packed. In cases where range conditions are marginal or poor, analysis of stocking rates, which is the key range management factor, becomes more difficult.

A landowner must then decide whether stocking of exotics will allow coexistence with the native white-tailed deer without adverse effect to the deer and the range health. Since the white-tailed deer population is difficult to manage, the stocking rates of the “exotics” must be balanced with the amount of available forage supply. In one sense, livestock such as cattle, sheep, and goats can be considered exotic since these animals were not “native” to the Texas rangelands or this hemisphere. Therefore, just as stocking rates of livestock must be monitored in relation to range condition, so must the stocking rate of exotic wildlife.

Even though sufficient forage may be available, the composition of the vegetation must coincide with the nutritional needs of the exotics being introduced. Native and exotic wild ruminants fit into three broad categories according to the feed type they tend to consume. Those three categories include Browsers, Intermediate Feeders, and Grazers. Browsers are those species that tend to consume browse (leaves of woody plants) or forbs (wildflowers and weeds). Intermediate Feeders tend to shift their diets throughout the year, and Grazers prefer mainly grasses. Some species overlap feeding types, but in general, browsers and grazers are considered specialists, and intermediate feeders are generalists.



For instance, white-tailed deer are classed as specialists and their annual diet consists of about 52% browse, 36% forbs, and only 12% grasses. Therefore, we must consider the white-tailed deer a small specialist with high nutrient requirements and little flexibility in its diet. The Sika deer, being a generalist, however, has the ability to adapt its diet from grasses to forbs and browse should conditions throughout the year dictate. This poses a potential problem for the white-tailed deer when it shares a habitat with the more flexible and competitive Sika.

A study conducted at the Kerr Wildlife Area illustrated this point during a project study by Armstrong in 1984. White-tailed deer and Sika were placed in an enclosed pasture. Over the course of this confinement, as range conditions fluctuated due to grazing and seasons, the browse and forbs were most intensely grazed reducing the vegetative composition to primarily grasses. The white-tailed deer were then forced to shift their diet to the remaining available grasses, but suffered from malnutrition being unable to break down the cell walls of those rangeland grasses. Being generalists, the Sika deer were able to shift their diet to less desirable grasses and survive, whereas the white-tailed deer became virtually nonexistent. Not only can the population of white-tailed deer decrease or be threatened in such an instance, but detrimental effects to the rangeland can also occur.

The overgrazing results go beyond that of merely affecting browse and forbs, to include grasses. Those grasses, which were most palatable and nutritional, received intense grazing pressure leaving less desirable grasses to reproduce. This can result in a shift of the composition of vegetation from those forages classified as decreasers to those classified as increasers unless the population of the exotic wildlife can be reduced. Decreasers are those forages that are most nutritional and palatable and

will eventually disappear with heavy grazing pressure. Increasers are those forages, which replace decreasers, but have a lower nutritional value and less palatability.

Controlling the population of exotic game is difficult to implement, yet it is vital to employ. Exotics were first introduced into south Texas in 1930 on the King Ranch. From that time numbers have increased dramatically. The Texas Parks and Wildlife first population counts in 1966 indicated approximately 7,770 exotic deer; by 1979 the population of the three major deer species had increased 375% to a total number of 36,938. By 1996 numbers had increased to 94,567 according to the Texas Agricultural Statistics Service.



The reason numbers of exotic deer have escalated is probably due to factors other than the species' reproductive rates. Rather, the exotic's survivability is largely due to the fact they are able to convert a variety of rangeland forage. In addition, most ranchers implement trophy hunts that encourage only the harvest of males. Therefore, the females remain to continue

populating their habitat. Although exotic species were originally confined to ranches with deer-proof fences, today there are increasing numbers of free-ranging animals that escaped through the carelessness of man. In order for landowners to manage their exotic deer populations, and thus preserve their range conditions, deer-proof fencing and a population control management plan are paramount.

In summary, for a landowner to prudently introduce exotics, he should implement sound range management practices focusing on forage supply and vegetative composition. Furthermore, he should recognize that exotics can out-compete native deer species. Finally, in order to control exotic populations, a landowner must maintain deerproof fencing and initiate hunting female as well as male deer.

## Finding A Balance

Now, back to the original question—should ranchers get exotic or go native? Balance or maintaining equilibrium in rangeland use is neither simple nor easy. On one side, increased revenues derived from exotic game provide an alternative income source for landowners. On the other side, range health and quality white-tailed deer populations must be maintained.

This balance of multi-species management can only be attained through assessing rangeland conditions, meeting dietary needs, and controlling exotic populations. In a nutshell, it is possible to get exotic, but not at the expense of staying native.

*Aaron Jennings earned first place with his paper in the High School Youth Forum competition at the 2003 SRM Meetings in Casper, WY.*

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